

## **ABSTRACT**

A double walled riser sump has an annular space between the two walls.

The provision of the annular space provides a means for monitoring the integrity of the two walls of the sump. The two walls of the sump are preferably separated by a  
5 thin film or a distance fabric that allows the passage of fluids, and preferably liquids. The annular space may be in fluid communication with a reservoir holding a monitoring fluid and positioned near the top of the sump to be easily accessible.

In some embodiments, a top of the riser sump is also double walled and the top annular space is in fluid communication with the annular space between the  
10 vertical walls. If a leak develops in either wall of the sump, a corresponding drop in the fluid level of the reservoir will occur.